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Applicant: Philip J. Pietraski Application No.: 10/698,721

REMARKS/ARGUMENTS

After the foregoing Amendment, claims 1-5, 12-16 and 32-36 are currently pending in this application. Claims 1, 12 and 32 are amended.

Claim Rejections - 35 USC §102 and §103

Claims 1, 12 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Publication No. 2002/0097686 to Qui (hereinafter Qui).

Claims 1, 12 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by European Publication No. 0899906 to Balachandran (hereinafter Balachandran).

Claims 2-3, 13-14 and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Qui and U.S. Publication No. 2004/0142698 to Bergel (hereinafter Bergel).

The present invention is a method for improved channel quality indication in a dynamic link adapted wireless communication system. As presently claimed in claim 1, a receiver receives downlink data communication, performs at least one current quality measurement on the downlink communication to determine the current quality of the downlink data channel and derives from the current quality a predictive channel quality indication estimating the <u>future</u> quality of the downlink data channel. The receiver then transmits the predictive CQI to the transmitter on a per time slot basis.

Volpe & Koenig

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Qui discloses an adaptive system which supports higher peak data rate and throughput in digital wireless communications. In accordance with Qui, the system comprises a long term prediction system (LRP) for fast fading mobile radio channels and a fast feedback system to enable the adaptive transmission. The disclosed system comprises a FFMPU which monitors the current, and predicts, future fast multipath fading using LRP and an FAU which makes decisions on some selection on coding rate, modulation level, power allocation, multi codes, etc. There is no disclosure though in Qui regarding the determining on a per time slot basis a predictive CQI. Accordingly, Qui does not anticipate claims 1, 12 and 32.

Likewise, Balachandran does not disclose Applicants claimed method and Balachandran discloses a system and method to measure channel quality in terms of signal to noise ratio for the transmission of coded signals over fading channels. There is no disclosure in Balachandran regarding deriving based on a current quality, a predictive channel quality indication estimating the future quality of the downlink data channel on a per time slot basis and transmitting the predictive CQI, wherein the predictive CQI includes at least one of a recommended transport block size, modulation format, or number of codes. Accordingly, Balachandran does not disclose each and every element of the Applicants disclosed method and apparatus.

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The Examiner further cites Bergel as teaching the step of storing at least one

current quality measurement, Koorapaty as storing a predictive value, and

Bruckert as teaching the deriving step utilizing a linear predictive algorithm to

derive the predictive value. Neither Bergel, Koorapaty nor Bruckert suggest or

teach the elements missing from Qui. As such, Qui, Balachandran, Bergel,

Koorapaty nor Bruckert alone, or in combination with one another, suggest or teach

the disclosed methods and apparatus, and therefore, do not render claims 1, 12 and

32 obvious.

Claims 2-5, 13-16 and 33-36 are dependent upon claims 1, 12 and 32,

and the Applicant believes these claims are allowable over the cited references of

record for the same reasons provided above.

Based on the arguments presented above, withdrawal of the §102 and §103

rejections is respectfully requested.

Conclusion

If the Examiner believes that any additional minor formal matters need to be

addressed in order to place this application in condition for allowance, or that a

telephonic interview will help to materially advance the prosecution of this

application, the Examiner is invited to contact the undersigned by telephone at the

Examiner's convenience.

- 8 -

PAGE 9/10 * RCVD AT 7/24/2008 3:27:07 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/46 * DNIS:2738300 * CSID:2155686499 * DURATION (mm-ss):03-02

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In view of the foregoing amendment and remarks, Applicants respectfully submit that the present application is in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,

Philip J. Pietraski

Darryl W. Shorter

Registration No. 47,942

Volpe and Koenig, P.C. United Plaza, Suite 1600 30 South 17th Street Philadelphia, PA 19103 Telephone: (215) 568-6400 Facsimile: (215) 568-6499

DWS/rlm Enclosure